

Amendment

Attorney Docket No. 024295-261

Serial No. 10/072,638

Page 6 of 8

Remarks/Arguments

Claims 1-28 remain in this application. Claims 1-6, 10-13, 16-18, 21-22 and 27-28 have been withdrawn by the examiner.

The office identified claims directed to patentably distinct species of the claimed invention and, therefore, required election of a single disclosed species for prosecution on the merits. Applicants affirm the election to prosecute the invention of claims wherein the pattern coating composition comprises a vegetable oil and a viscosity reducer and where the viscosity reducer is an oil. The Office action indicates that claims 7-9, 14, 15, 19, 20 and 23-26 are readable on the elected species. Accordingly, claims 1-6, 10-13, 16-18, 21-22 and 27-28 have been withdrawn.

Claims 7-9, 12-15, 19-20 and 23-26 stand rejected as being unpatentable over U.S. Patent No. 4,522,250 to Laemmle et al. Applicants respectfully traverse this rejection for the following reasons. The '250 reference discloses a parting composition containing glycerol trioleate and castor oil in a process for continuously casting aluminum and aluminum alloys. The viscosity of the lubricant may be adjusted by adding other animal or vegetable oils or synthetic or petroleum oils. The lubricant is applied to a mold prior to casting a molten metal comprising an aluminum base alloy into the mold. By contrast, the claims of the present application are directed to pattern coating compositions applied to mold pattern surfaces to facilitate release of a sand mold. Applicants respectfully submit that the composition disclosed in the '250 reference is not pertinent to the claims of the present application. The process disclosed in the '250 reference is a high temperature process wherein the thermal stability of the lubricant is of great importance. See column 3, lines 53-55. The present process, by contrast, is conducted at ambient temperatures. One of skill in the art looking for a pattern coating composition for a sand casting operation would not be motivated to look to the lubricants used in continuous ingot casting. Furthermore, there is no disclosure or suggestion of the VOC or benzene levels associated with

Amendment

Attorney Docket No. 024295-261

Serial No. 10/072,638

Page 7 of 8

the composition that is disclosed in the '250 patent. Accordingly, applicants respectfully submit that claims 7-9, 12,-15, 19-20 and 23-26 are patentable over the '250 reference.

Claim 7-9, 14-15 and 23-26 stand rejected as being unpatentable over CN 10694332.

The '432 reference discloses binders for molds and cores wherein the binders include petroleum pitch and vegetable oil residue. Applicants respectfully submit that the '432 reference fails to disclose or suggest a method of protecting foundry molds by applying to mold pattern surfaces a pattern coating composition comprising vegetable oil and a viscosity reducer. The composition disclosed in the '432 reference, by contrast, is a binder and not a release composition. One of skill in the art would not be motivated to look to binder compositions for formulating pattern coating compositions. Furthermore, the binders disclosed in the '432 reference include significant quantities of solvent and, therefore, these compositions would most likely fall outside the VOC limits set forth in the claims of the pending application. Furthermore, applicants respectfully submit that the broad disclosure of petroleum pitch fails to render obvious claims 7-9 which are specifically directed to mineral seal oil. For at least these reasons, applicants submit that the rejection under Section 103(a) is improper and request that the rejection be withdrawn.

In view of the foregoing response, it is respectfully submitted that the claims now pending are patentably distinct from the references cited and are in condition for allowance. Reconsideration and withdrawal of the rejections of record is respectfully requested. If the examiner wishes to discuss any aspect of this response, please contact the undersigned at the telephone number indicated below.


Amendment

Attorney Docket No. 024295-261

Serial No. 10/072,638

Page 8 of 8

Respectfully submitted,



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